

Warding off Calamity in Japan: A Comparison of the 1855 Catfish Prints and the 1862 Measles Prints

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Starting in late 1855, Edo (Tokyo) experienced a string of misfortune. In the tenth month of that year, a strong earthquake shook the shogun's capital resulting in over 10,000 casualties and the destruction of approximately 14,000 structures. Particularly susceptible to damage were storehouses built with heavy tile roofs intended to protect against fires. Having learned from this experience, most residents of Edo rebuilt their storehouses with thatched roofs, just in time for a powerful typhoon that struck the following summer to blow most of them away. In 1857, a severe influenza epidemic struck Edo. During the fifth month the epidemic interfered with government administration in Edo Castle and likely took the life of leading bakufu official Abe Masahiro 阿部正弘 (1819-1857), who died in the sixth month. The following year during the seventh and eighth months, cholera struck Edo and surrounding areas. Contemporary sources commented on the stench from bodies piled up in the streets in some areas of the city. The cholera outbreak claimed approximately 30,000 lives, roughly three to four times more deaths than in the 1855 earthquake.

Following this string of natural upheavals was a series of political upheavals: the US-Japan Treaty of Amity and Commerce 日米修好通商条約 in 1858, Ii Naosuke's 井伊直弼 Ansei Purge 安政の大獄 (*Ansei no taigoku*), 1858-59, followed by Ii's assassination in the 1860 Sakurada-mon Incident 桜田門外の変. Soon thereafter, the malevolent forces of nature returned in the form of a severe measles epidemic that swept through most parts of Japan in 1862. People began vividly to feel what one historian has called “a seething condition of society” (*butsujō-sōzen* 物情騒然). In 1863, foreign ships destroyed Chōshū 長州 guns at

Shimonoseki 下関. Military activities in that and subsequent years pushed the price of rice to record levels. Ordinary people in the capital began to feel a sense of famine as rice became too expensive to eat. This upsurge in price was followed by the *Uchikowashi* 打ち壊 riots in Ōsaka 大阪 and Edo in 1866, and the bakufu began its final collapse the following year.¹

This paper compares two prominent cultural products from these events, the catfish prints, or *namazu-e* 鯰絵, of 1855 and the measles prints, *hashika-e* 麻疹絵, of 1862. The *namazu-e* evolved into a variety of motifs over the two months during which they were produced. My concern here is with the early form of these prints, those produced in response to the earthquake as a frightening manifestation of the cosmic forces. Examining the iconographic features and the content of these two genres of popular prints provides insight into popular understanding of natural calamity and disease.

The *namazu-e* and *hashika-e* were part of a general phenomenon during the nineteenth century of depicting the abstract causes of calamity and disease in concrete visual form. Another major manifestation of this phenomenon was the genre of prints known as *hōsō-e* 疱瘡絵, or smallpox prints.² Most likely, later examples were at least in part inspired by the 1855 prints and their commercial success. Both the *namazu-e* and the *hashika-e* feature mixtures of magical and talismanic text and visual symbols—attempts both to explain and to limit the severity of calamity and disease. In this sense, the prints provide insight into what Sander Gilman has called “cultural fantasies of health, disease, and the body”.³ There are numerous studies on the power of images in the western world and the fear that this power sometimes induced.⁴ Surely the rendering of cosmic forces into visual form in nineteenth-century Japan enhanced the perception of understanding these forces on the part of ordinary people and was thus a more powerful mode of representation than text alone. Many of the issues connected with debates over images and their power in Europe, however, would not have been applicable to Japan, which lacked a tradition that regarded idolatry as evil.

Namazu-e

Edo began to shake violently at approximately 10 pm on the second day of the tenth month (November 11). The last time a major earthquake shook the city was in late 1703, and there had been no noticeable precursors to the 1855 main shock. The 1855 earthquake, therefore, came as a great surprise. In the days after the main

¹ For a convenient summary of this series of events, see Noguchi Takehiko (1997), pp. 216-222.

² For detailed studies of the religious significance of smallpox and *hōsō-e* see Rotermund (1995) and Rotermund (2001).

³ Gilman (1995), p. 18.

⁴ Two especially well-known examples are Mitchell (1986) and Freedberg (1989).

shock, sensational press reports, frequent severe aftershocks, a shortage of coffins, and the inevitable confusion connected with the event all combined to produce the impression of severe devastation. The earthquake was indeed destructive, with an estimated Richter magnitude of between 6.9 and 7.1 and a shallow point of origin that intensified ground movement. The shaking caused an estimated 8,000-10,000 deaths and serious injuries among civilians, an unknown but probably equally great number of casualties among military personnel, and extensive property damage.

Despite significant destruction, the overall fatality rate for Edo was about one in 170. Areas of the city on a firm soil base generally suffered few casualties and only moderate damage to structures. During and soon after the main shock, the earthquake was surely a terrifying event for everyone. Aftershocks, often severe, were a daily occurrence, and many of Edo's residents slept outside in makeshift shelters for fear that the worst of the shaking was yet to come.⁵

Within two days of the main shock, makeshift printing presses began producing earthquake-related broadsides. Among these early offerings were prints featuring giant catfish (*namazu*), a genre that later came to be called *namazu-e* (catfish prints).⁶ By the nineteenth century, giant catfish had become a well-known symbol of earthquakes in the Kantō 関東 area. The association of *namazu* and earthquakes emerged in the area around Lake Biwa 琵琶湖 during the late sixteenth century, spread east during the seventeenth century, and became entrenched in the popular imagination by the late eighteenth century. In the process, the earthquake-*namazu* association became linked with the *kaname-ishi* 要石 (literally 'foundation stone' but in this case 'cap stone' would be more accurate) of the Kashima Shrine 鹿嶋神宮 in Hitachi 常陸, to the north-east of Edo. The giant *namazu* served as a convenient and dramatic symbol of the mysterious power of the cosmic forces periodically and unexpectedly to cause the earth to shake violently.

The basic scenario on which many of the *namazu-e* rely for effect is that of a giant, whale-like *namazu* living under the earth's surface at the site of the Kashima Shrine. Its movements cause earthquakes. The *kaname-ishi* presses down on the head of this beast, rendering it immobile. The foundation stone passively assisted by gravity, however, would be insufficient for the task of suppressing the *namazu*. Therefore, Kashima Daimyōjin 鹿嶋大明神, the shrine's principle deity, presses down on the *kaname-ishi* (Figure 1). Obviously this arrangement is potentially unstable, especially during the tenth lunar month. Known as the *kannazuki* or *kaminazuki* 神無月 (month of no deities), at this time the major deities all travel to Izumo 出雲 for a convention, leaving lesser deities in charge of whatever functions their celestial superiors would normally provide.

In hindsight we know that the main shock on the night of November 11 caused the worst shaking. Thereafter, although aftershocks continued daily for more than a

⁵ Japanese scholars have produced many excellent studies of the Ansei Edo Earthquake. Perhaps the best overall analysis is Kitahara Itoko (2000). In English see Markus (1997).

⁶ For studies of *namazu-e*, see Ouwehand (1964) and Smits (2006).

month, they gradually decreased in frequency and severity. Eventually Edo's residents began to realize that the worst was behind them and that rebuilding offered the opportunity for substantial windfall profits for many types of laborers and suppliers of goods and services. In this context, they began to interpret the earthquake positively, as a cosmic intervention to re-balance society (*yo-naoshi* 世直し). Effective bakufu and private relief efforts also played a role in the generally positive interpretation of this event among townspeople. Our focus here will be only with the early *namazu-e*, not those produced after rebuilding commenced.

Unlike the case in 1923 when most earthquake deaths were the result of fire, in 1855 collapsing structures caused most of the casualties. Many early *namazu-e* were talismanic, produced to be purchased and affixed to the main beam of houses and shops. Figure 2 is a typical example. It draws on a variety of religious lore and iconographic techniques to convey an overall sense that Kashima 鹿島 and other local deities now have the situation under control. Kashima's sword replaces the *kaname-ishi* (a common substitution), and the thunder deity uses his mallet to assist in suppressing the earthquake. Smaller *namazu* represent recent past earthquakes. The sword in the *namazu*'s tail is reminiscent of the sword in the tail of the eight-headed dragon that Susanoo 須佐之男 destroyed in Japan's ancient chronicles.⁷ The sword points to "Kashima" written in Daoist-style spirit writing, above which are the seven stars of the Northern Dipper. In short, deploying a variety of themes from folk religion this print seeks to convince potential buyers that its presence on the main beam might tip the balance of cosmic forces in the residents' favor.

Other varieties of early *namazu-e* feature large, angry mobs attacking and beating a giant *namazu*. Figure 3 is a typical example. Members of society who suffered the most from the earthquake are especially prominent in the attack, in this case Yoshiwara 吉原 courtesans and employees of the Yoshiwara brothel district. Yoshiwara suffered especially severe damage because it was built in a swampy area upon unconsolidated fill, which amplified ground motion from the earthquake. Indeed, all such areas built on unconsolidated fill in and around Edo suffered severe damage.

In 1855, nobody understood the causes of earthquakes in the kinds of geological terms and concepts common today. Instead, a variety of academic and popular theories posited the accumulation of imbalances or explosive forces under the ground. Moreover, the classical notion whereby earthquakes and other major calamities of nature served as a cosmic warning or re-balancing in the face of social corruption was common and often complemented academic theories of earthquake mechanisms.⁸ On the ground, major earthquakes were a frightening, disorienting

⁷ See, for example, Torii Kiyomasu II 鳥居清倍 (1706-1763), "Susanoo no Mikoto Killing the Dragon (1748)", in King and Iwakiri (2007), pp. 70-71. Susanoo does not explicitly appear in the *namazu-e*, but he does appear—looking much like Kashima—in many *hashika-e*.

⁸ For an excellent discussion of the various theories of earthquakes in Tokugawa Japan see Hashimoto Manpei (1983), pp. 4-58. See also Smits (2006), pp. 1050-1052.

act of nature. The shaking made no distinctions between different walks of life. Its cause unclear, the major protection against earthquake damage was magic and an appeal to popular deities. One common rumor, for example, illustrated in several *namazu-e*, was that many survivors of the earthquake were surprised to find one or more strands of white horse hair in their garments. These hairs had been dropped onto the city from the air by the white horse of the Ise shrine (*Ise jimme* 伊勢神馬), and possession of one was certain protection against bodily harm (Figure 4).

Hashika-e

The measles epidemic of 1862 shared much in common with a large earthquake in terms of its psychological impact. The main reason is that measles in Japan was a periodic disease, typically occurring once every twenty to thirty years. Outbreaks usually occurred as a result of measles coming into the Japanese islands from an outside source. In these cases, the disease would race through the population with a very high infection rate among those born since the previous outbreak. In other words the onset of measles was rapid, widespread, and affected both children and young adults. The outbreak in 1862 was especially severe, and there had been no measles in Japan since the previous outbreak in 1836, twenty-seven years earlier.⁹

Much of the Japanese secondary literature, drawing on contemporary accounts, regards the measles outbreak of 1862 as having been characterized by a high mortality rate. Often quoting a folk saying to the effect that “Smallpox determines the beauty of one’s face; measles determines survival”, these sources state that measles claimed more lives than smallpox. Hartmut O. Rotermund is in agreement with the Japanese consensus, saying “the measles epidemic of 1862 was one of the largest and most devastating in the history of the country; it claimed even more victims than, for example, the disastrous cholera epidemic of 1818.”¹⁰ Jannetta points out, however, that “Tokugawa 徳川 sources leave little doubt that even though measles caused epidemics that were more visible and more disruptive than smallpox,” in the larger temporal context measles may not have been as important a cause of death as smallpox owing to the cyclical nature of measles outbreaks.¹¹ The key point is that like the earthquake of 1855, the psychological impact of the measles epidemic of 1862 was surely great. The major cultural product from the 1862 epidemic was also similar to that of the earlier earthquake, namely *hashika-e*

⁹ For a thorough discussion of measles in Japan, see Jannetta (1987), pp. 108-144, and Suzuki Noriko (2004).

¹⁰ See Rotermund (2005), p. 253. For typical examples of the consensus among Japanese scholars see Nakano Misao (1980), p. 84 (relying on earlier work by Fujikawa Yū), and Sōda Hajime (1989), p. 306. See also Suzuki Noriko (2004).

¹¹ See Jannetta (1987), p. 141. Cf. also pp. 134-144 for an analysis that includes comparisons with other countries.

(measles prints). As with the *namazu-e*, there were many varieties of *hashika-e*, and here I will examine only a few examples.

In Figure 5, the deity Mugi-dono Daimyōjin 麦殿大明神 (Lord Wheat) suppresses a measles demon with his long sword. Lord Wheat in this print bears a striking resemblance to Kashima in Figure 1, and the head of the measles demon looks much like that of a giant *namazu*. Even the people gathered before Lord Wheat's image, who are thanking him for light cases of measles, look like the small *namazu* bowing to Kashima in Figure 1. It is almost certain that the immensely popular and lucrative *namazu-e* of 1855 provided iconographic design ideas and general motifs for the 1862 prints.

One major difference between the two genres is that the 1855 prints were all anonymous, whereas those of 1862 bear publisher and artist information. Rotermund speculates that this difference may be connected with a slackening of censorship. More likely, however, is that the 1855 prints became commentaries on society with political implications (which is indeed why they incurred a bakufu prohibition, albeit one initially ignored by the publishers). The *hashika-e*, on the other hand, focused on personal health, a much safer topic. Publishers of *hashika-e* therefore could safely follow the rules without fear of their goods being confiscated or incurring fines.¹²

"Lord Wheat" might seem a peculiar name for a protective deity. In this depiction he resembles mendicant monks of the Handa Inari Shrine 花田稲荷神社, but is otherwise not an established member of Japan's pantheon of deities. Lord Wheat and the appearance in some *hashika-e* of children clutching bundles of wheat is a case of verbal magic. Wheat and barley husks can be called *hashika* 芒, so the wheat plant has *hashika* as part of its normal makeup. One common variety of magic involved attempting to transfer the disease to Lord Wheat or to invoke Lord Wheat to lessen the severity of a case. The basic procedure was to write the afflicted person's name and age on the back of an ilex (*tarayō* 多羅葉) or holly (*hiiragi* 柊) leaf along with this following short verse (subject to slight variations):

Mugidono wa umarenagara ni hashikashite
 麦殿は生まれながらにはしかして。
 (Lord Wheat was born with *hashika*.)
Kasetaru nochi wa waga mi narikeri
 かせたるのちは我が身なりけり。
 (The pustules now gone, I am the same.)¹³

¹² See Rotermund (2005), p. 252. Regarding some of the political implications of the *namazu-e*, see Smits (2006).

¹³ Nakano Misao (1980), p. 84. See also Sōda Hajime (1989), p. 308, and Rotermund (2005), pp. 275-276.

If an actual leaf is not available, a piece of paper cut to the same shape will do. The leaf or paper is then placed in a river or stream to be swept away by the current, hopefully, along with the disease. This interest of Lord Wheat as a protective deity is the likely reason that the Chinese mythical creator of agriculture, Shennong 神農 (Jp. Shinnō), appears in several *hashika-e* (Figure 6). The standard depiction of Shennong featured him chewing on a stalk of grain, and by the Tokugawa period Shennong had come to be associated with medical pharmacology.

Verbal magic was common in *hashika-e*. Pears, for example, were desirable foods because their name, *nashi* 梨, sounded the same as *nashi* 無し meaning ‘no [disease]’. Monkey dolls appear in some prints because *saru* 猿 (monkey) is a homonym of the verb *saru* 去る ‘to leave’. Returning to the matter of wheat, placing an empty horse-feeding bucket over the head of a child afflicted with measles was thought to be efficacious in lessening the severity of measles mainly because the bucket once contained *hashika* (grain husks), but now the *hashika* is gone. In some explanations of this practice, any horse pail will work. According to others, the pail must have come from a stable facing the east, and according to some accounts, only pails used to feed horses at the Asakusa Shrine 浅草神社 have medicinal value.¹⁴

Early catfish prints prominently featured Kashima Daimyōjin along with Ebisu 恵比寿 (Kashima’s stand-in during the tenth month), the thunder deity, Amaterasu (Kashima’s possible replacement), and several lesser local deities.¹⁵ *Hashika-e* featured an even wider variety of deities than *namazu-e*, and no single deity was as prominent as was Kashima in the catfish prints. In addition to Lord Wheat, his Chinese counterpart Shennong, and Shōki 鐘馗 the demon slayer, *hashika-e* might feature the Measles-prevention Deity of Izumo (Izumokuni *hashika-yoke mikami* 出雲国麻疹除御神), Susanoo, Gozu Tennō 牛頭天皇 (Emperor of the Ox-headed Wardens of Buddhist Hells), and the warrior Chinzei Hachirō Tametomo 鎮西八郎為朝. Prints featuring any of these deities might be affixed to the main entrance to a home in the hope of warding off the disease.

Often in the prints, measles appeared in the form of one or more demons to be subdued or driven away, and sometimes those doing this task were ordinary people. In the manner of many early early *namazu-e*, measles prints often depicted crowds of people subduing the measles demon. In Figure 7, for example, the crowd subdues and binds the measles demon with the assistance or at the direction of Susanoo. Occupations most adversely affected by the epidemic are especially prominent in the print such as ferry boat operators and courtesans. Interestingly, a pharmacist and physician in the foreground do not participate in the suppression of the demon but instead seem to strike poses asking for leniency on its behalf—much

¹⁴ Sōda Hajime (1989), p. 308.

¹⁵ For an excellent study of the cast of characters appearing in *namazu-e*, see Tomisawa Tatsuzō (1996).

like the construction workers in Figure 3 with respect to the earthquake *namazu*.¹⁶ Both *namazu-e* and *hashika-e* reflect an awareness that certain groups in society benefit from the calamity and others have suffered particular harm from it.

When the mob attacking the measles demon is not assisted by a specific deity, the print often features magical cures for measles or dietary and lifestyle rules. In Figure 8, for example, a mob that includes ferry boat operators, courtesans, ‘various businesses’ (*gyōshu* 業種), storytellers, and others attack and subdue the demon. The text above is divided into a list of ‘prohibited items’ (*kinbutsu* きん物) and ‘good items’ (*yokimono* よき物). Leading the list of prohibited items are sex (*bōji* 房事), bathing, and liquor. The other prohibited items are foodstuffs, including, river fish, leeks, burdock, and mushrooms. Desirable items include pickled radish (*takuan* たくあん), loach (*dojō* 泥鰌), sugar, red beans (*azuki* 小豆), loquat (*biwa* 枇杷), and kidney beans (*ingen* インゲン). The prohibited and desirable items in Figure 8 are typical, although the prints as a whole are not entirely consistent with respect to dietary advice.

Figure 8 is a good example of a prominent theme in many *hashika-e*: control of this disease is within our power as individuals. The intervention of physicians or deities was not necessarily a requirement, or even beneficial at all, for conquering measles. The early *namazu-e* contains no corresponding message of self reliance. The main reason for this difference is surely because of the perceived causes of each variety of calamities. The earthquake was caused by imbalances under the earth symbolized by the movement of a giant catfish. Some Japanese regarded these subterranean imbalances to have been the result of social corruption, but even so, the earthquake itself was entirely beyond the control of any individual. Measles was different. Its cause was generally thought to be a poison innate to the womb (*taidoku* 胎毒) or perhaps innate to the body in general. The term *taidoku* suggests that the disease was passed from mother to child.

Figure 9 shows military deities suppressing demons of measles, smallpox, cholera, and dysentery. The text briefly explains the nature of each disease. After mentioning that measles and smallpox strike once and then never again, it explains that smallpox comes from “within the womb” (*tainai yori* 胎内より) and manifests itself outwardly. Measles, by contrast, remains within the flesh of the womb itself. Therefore, although red spots appear in a case of measles, they do not fester. It is tempting to read “womb” as something like “deep within the body”, considering that adult males also contracted the disease. On the other hand, many contemporary sources reported that pregnant women and those giving birth were

¹⁶ Rotermund (2005) mentions this print along with others in a discussion of ambivalent or hostile attitudes toward doctors and pharmacists during the epidemic. See especially pp. 258-263.

most susceptible to measles,¹⁷ and it was surely possible at the time to imagine that young men contracting the disease had acquired the potential for infection at birth.

The most common topic in the text of the *hashika-e* is lists of good and bad dietary and lifestyle practices. We have seen that these prints reflect considerable ambiguity, even outright skepticism, about the efficacy of remedies offered by the medical establishment.¹⁸ On the other hand, despite some variation regarding the lists of good and bad foods, the prints strongly suggest that good health is largely a function of proper lifestyle and diet. Those who follow healthy practices are less likely to contract measles or, if they do, will probably suffer only a mild case. Taking steps in advance to fortify one's self and one's children is the ideal approach to dealing with the epidemic. Figure 10 is an excellent example of this message stated explicitly. A lecturing physician warns an attentive audience against reliance on medicine and prayers when disease strikes. Instead, people should take proper care of themselves prior to the onset of symptoms. Measles, in other words, was to some extent a preventable disease. The key to this prevention was proper diet and lifestyle. Of course, in hindsight especially, such a view can be seen as blaming the victims.

This notion of diet and lifestyle as the key to warding off disease is not limited to *hashika-e* and the 1862 measles epidemic. In the case of Cholera, for example, even after knowledge of the organism causing the disease was widely available, newspapers and other popular media in Japan emphasized proper diet as the main defense against the disease even into the twentieth century. Merchants even tried to exploit this tendency, sometimes without success. For example during an epidemic in 1886:

A producer of pickles in Odawara 小田原 reputedly made a fortune during the cholera epidemic in 1858. Learning this, a merchant speculated on pickles and prepared a huge stock, but, alas, [a] pickles diet at this time did not become fashionable and he suffered a heavy loss.¹⁹

The popular dietary practices for cholera tended to be more mercurial than those for measles.

Conclusions

Both the early *namazu-e* of 1855 and the *hashika-e* of 1862 are lenses through which to view popular reactions to calamities in Bakumatsu Japan and the cultural

¹⁷ Sōda Hajime (1989), p. 308, Jannetta (1987), p. 123, and Rotermund (2005), pp. 254-255.

¹⁸ For an especially sarcastic example of this scepticism, see Fig 3 in Rotermund (2005), and the discussion of it, pp. 259-260.

¹⁹ Suzuki and Suzuki (2008), p. 196.

milieu that produced these reactions. The two genres of prints have much in common, beginning with iconographic style. Each depicts efficacious deities and magic, with the prints themselves often purporting to serve as talismanic protection when attached to the appropriate part of one's house. Owing to different conceptions of the causes of earthquakes versus measles, the *hashika-e* put a greater stress on individual responsibility for one's health and one's children by following the lifestyle and dietary rules.

Looking forward in time, it is interesting to consider the discourse of public health in Japan approximately two decades after the *hashika-e* appeared. Starting in the 1880s, Japanese intellectuals, physicians, journalists, and the Meiji state began to place great emphasis on 'hygiene' (*eisei* 衛生), a quasi-medical, quasi-moral term that suggested a well-regulated, 'modern' lifestyle. In the Meiji context, hygiene encompassed the approach to lifestyle and dietary practices prescribed by the *hashika-e* (albeit with different specifics regarding dietary advice), as well as much more (Figure 11).²⁰ I do not mean to suggest that *hashika-e* caused or greatly influenced the specific features of Meiji-era hygiene. The *hashika-e* does reveal, however, the presence of the underlying logic of what would shortly thereafter come to be subsumed under the term hygiene: individuals are responsible for maintaining their health by proper lifestyle choices. Of course, in 1862 this imperative was aimed narrowly at preventing measles. During the Meiji period, it broadened, becoming a patriotic duty of citizens to build a strong Japan.

²⁰ For an excellent discussion of "hygiene" in the making of modern Japan see Rogaski (2004), pp. 136-164. See also Suzuki and Suzuki (2008).

Figures



Figure 1. *Araureshi taianjitsu ni yuri-naosu* あら 嬉し 大安日に ゆり 直す (Joyous lucky day of rectification through shaking). In this print Kashima has restored order to the cosmic forces after the 1855 earthquake. The large writing consists of magic verse to promote good fortune and the smaller text below is the apology of the *namazu*. The several small *namazu* represent recent earthquakes elsewhere in the Japanese islands. This print nicely illustrates the basic metaphor underlying many of the other *namazu-e*: Kashima suppresses a giant *namazu* with the *kaname-ishi*, thus preventing earthquakes. Print #38 in Miyata and Takada (eds.), (1995).



Figure 2. *Jishin o-mamori* (Protection against earthquakes). This talismanic print was intended to be attached to the main beam of one's house to prevent further damage from shaking. It features Kashima's sword in place of the kaname-ishi, with the thunder deity using his mallet to assist in suppressing the giant *namazu*. Notice that the *namazu* here is a hybrid creature, part catfish and part dragon. The dragon-like features are vestige of the *namazu*'s cultural origins. The ultimate origin of Japan's earthquake *namazu* was the Chinese *ao* (鼇 or 鰲), a hybrid fish/turtle/dragon. The characters on the robes of the smaller *namazu* indicate specific past earthquakes, such as the 1830 Kyoto Earthquake. Print #37 in Miyata and Takada (eds.), (1995).



Figure 3. *Shin-Yoshiwara ōnamazu yurai* しんよし原大なまづゆらひ (Tale of the great namazu of Shin-Yoshiwara). Yoshiwara courtesans and employees attack the giant *namazu*, and children attack a small one. In the upper left, members of the construction trades, who stand to profit heavily from the earthquake, rush to the *namazu*'s defense. Compare with the physician and pharmacist in Figure 7 below. Print #46 in Miyata and Takada (eds.), (1995).

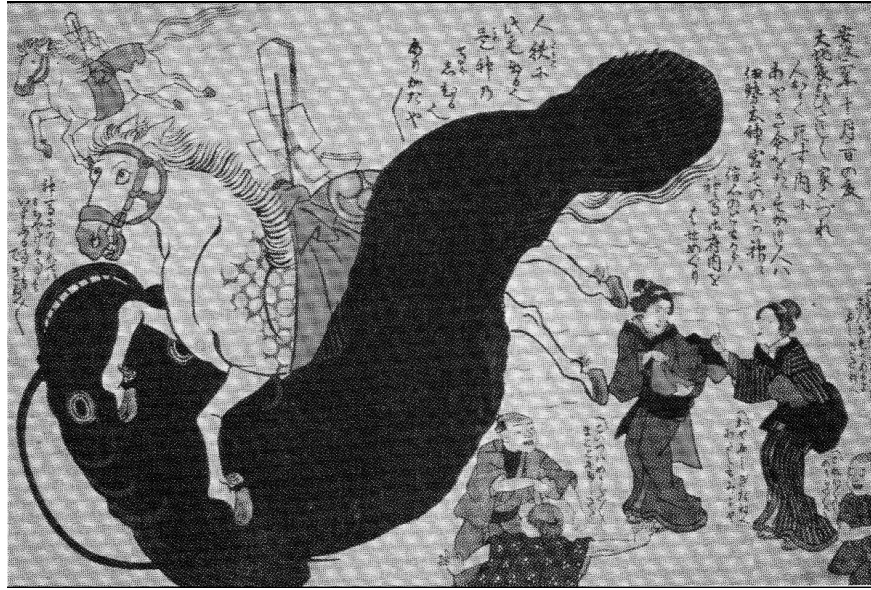


Figure 4. Figure 8. *Namazu ni noru Ise Jingū jinme* 鯰に乗る伊勢神宮神馬 (The sacred horse of the Ise Shrine mounts the *namazu*). Here Amaterasu is represented by sacred folding paper (*gohei* 御幣), and the horse appears in two scenarios: riding across the sky and suppressing the earthquake *namazu*. Notice the many strands of horse hair floating in the air, ending up in people's clothing. Print #31 in Miyata and Takada (eds.), (1995).



Figure 5. *Mugi-dono Daimyōjin* (Great wisdom deity Lord Wheat). On his armor is written the name of a powdered black rhinoceros horn thought to be an effective medicine against measles. Compare with Figure 1. Image #73 in Nakano (1980), p. 92; see also Sōda (1963), nineteenth unnumbered image, Sōda (1989), p. 309.



Figure 6. Shennong (Jp. Shinnō) appears in this and several other *hashika-e* chewing on stalks of grains and was likely regarded as a Chinese version of Lord Wheat. The figure in the upper left is Shōki, the slayer of demons, also of Chinese origin. Sōda (1963), second unnumbered image; for another example see Nakano (1980), #80, p. 94.



Figure 7. A crowd assisted by Susanoo subdues and binds the measles demon. In the top left of the print a ferry boat operator wields an oar. In the center of the image are two courtesans. The kneeling figure at the lower right is a pharmacist who stands to gain financially from the epidemic. His posture suggests that he is urging restraint on the part of the mob. The physician, lower left, also refrains from assisting the crowd. Compare with the construction workers in Figure 3 above. Image #65 in Nakano (1980), p. 89.



Figure 8. A crowd attacks and subdues the measles demon. Here there is no obvious divine assistance, but instead folk remedies, dietary rules, and lifestyle changes assist the crowd, whose iconography indicates occupations harmed by the epidemic. A storyteller, for example is indicated by *mukashi-banashi* 昔ばなし (long ago ...) written on a folding fan. Image #62 in Nakano (1980), p. 88; see also Sōda (1963), twenty-fourth unnumbered image, and Sōda (1989), p. 309.



Figure 9. *Hashika-nochi no yōjō* (Post-measles care). Military deities suppress disease demons. The text explains the nature of several diseases including measles and smallpox. Sōda (1989), p. 307.



Figure 10. A medical scholar lectures on the importance of preventative health care. Sōda (1989), p. 308; see also Sōda (1963), eighteenth unnumbered image.



Figure 11. *Eisei sugoroku*, produced by the Dai-Nippon Shiritsu Eiseikai 大日本私立衛生会 in 1884. Sugoroku is a type of board game in which the general object is to move from the start (here the lower right square labeled *shusse* 出生 (birth)) and, via roll of the dice and text in each square, attain a glorious finish (top center—a party celebrating a long, healthy life). The text and scenes in each square contain messages about beneficial and harmful activities and stages of life. The order of topics between the start and finish is: breast feeding, vaccination, kindergarten, elementary school, nutrients, hot spring baths, addiction, neglect of one's health, cows' milk, infirmity, scarves, hospitals, labor, filth, adulthood, disease, drinking water, cleanliness, health, marriage, exercise, the Shiritsu Eiseikai (Private Hygiene Association), rice cake celebration, and recreational swimming. Katō and Matsumura (2002), pp. 228-229.

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